**[0018]** FIG. **4**B is an illustrative view of one embodiment of a medical device interaction with a food item and information provided to the user;

**[0019]** FIG. **5** is an illustrative view of various embodiments of the device in use while shopping;

**[0020]** FIG. **6** is an illustrative view of another embodiment of the device in use while shopping;

**[0021]** FIGS. **7**A-**7**C show various embodiments of the bagging apparatus;

**[0022]** FIG. **8** is an illustrative view of one embodiment of the device communicating position data for food items to the user;

**[0023]** FIG. **9** is an illustrative view of various embodiments of food item image recognition embodiments;

**[0024]** FIG. **10** is an illustrative view of one embodiment of a unit reader;

**[0025]** FIG. **11** is an illustrative view of one embodiment of a device incorporated onto a card; and

**[0026]** FIG. **12** is an illustrative view of one embodiment of a device being incorporated into glasses.

## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

**[0027]** The device and methods described herein relate to interaction with food items, either directly or indirectly, in order to manage the food items. Food items include any prepared food, menu items or individual item or items that are edible. The device includes an electronic medical device having any one or more of the following: a memory, processor, screen, housing, wireless communication device, a speaker, a vibration motor, a power supply, a speaker, a radio, a camera, software running a user interface, a housing, an input mechanism, bar code scanner, camera, and/or RFID reader. Medical devices include but are not limited to: glucose meters, continuous glucose monitor handheld device, remote controllers for medical devices including infusion devices and/or continuous glucose monitors, and infusion devices including insulin pumps. In one embodiment, the medical device is a remote controller device for an infusion pump where the remote controller device includes a glucose meter.

**[0028]** Other electronics devices may be used including but not limited to, a consumer electronic device. Consumer electronic devices include but are not limited to any device with the capability to receive information. The medical devices or other electronic devices may receive information through any means including but not limited to an RFID reader, a bar code scanner, manual input using a capacitance slider, pad, touch screen, button or buttons. The consumer electronics devices include, but are not limited to, a personal data assistant (PDA) either with or without internet or email service, a watch, a cell phone.

**[0029]** The electronic devices or medical devices interact with the food items in various levels and with various management capabilities. The various interactions are described herein separately, however, it should be understood that one or more, in any combination, can be performed by the same electronic or medical device.

**[0030]** In one embodiment, the electronic device or medical device includes a database and/or is connected via wireless connection to a database that includes nutritional information about the food item. Additionally, the electronic device or medical device may include a database containing user profile information. This user profile database may be cross-referenced with the food database. Either or both databases may be learned databases. In another embodiment, the electronic device or medical device processes payment for the food item. In another embodiment, the electronic device or medical device alerts or alarms when a particular food item is available and/or within a particular distance from the electronic or medical device. In still another embodiment, the electronic or medical device, having access to biometric information either stored in the memory of the device or else accessible through wireless communication, suggests a food item or an interaction with a food item. In another embodiment, the electronic or medical device tracks the interaction with a food item.

**[0031]** There are a number of embodiments for the interaction between the food item and the electronic or medical device. Any of the following embodiments can be used in the devices, or methods, in any combination.

**[0032]** The interaction may be initialized by a signal sent from the food item to the electronic or medical device, e.g., a RFID transponder within the food item packaging or on a menu item is read by an RFID reader on the device. However, the interaction may be initialized by the electronic or medical device reading a bar code on the food item. The interaction may be initialized by a code being entered into the electronic or medical device manually, by a user. Additionally, the interaction may be initialized by an optical image being taken by the electronic or medical device of the food item. Also, the interaction can be initialized by a signal being sent from a device directly related to the sale of the food item, i.e., a vending machine or a store shelf (see smart shelves as described herein).

**[0033]** The electronic or medical device receives the information regarding the food item and may use this information in any one or more of a number of food management tasks. The tasks will be described separately, however, it should be understood that one or more of these tasks can be done to any one piece of food item information. In one embodiment, all of these tasks are performed. Additionally, the tasks described herein are meant to be limiting; other tasks will be readily understood to one of ordinary skill in the art. The tasks include informing of nutritional content, tracking food items, suggesting food items, suggesting user action in response to the ingestion of a food item, calculating caloric intake, calculating recommended amount, calculating bolus amount, signaling food items, purchasing food items, recommending food items, tracking inventory of food items, tracking location of food items, mapping out location of food items, suggesting particular locations to find the food items, and many other tasks that will be described in more detail below.

**[0034]** DEVICES. Referring first to FIGS. **1**A-**1**D, the electronic device ("device") **50** used can be any device as described in more detail above. The device includes, at a minimum, an information input or receiver such that the device is able to identify the food item. In FIG. **1**A, the food item "calls out" to the device, i.e., the food item **52** may contain an RFID transponder and the device **50** may contain an RFID reader. In FIG. **1**B, the device **50** "calls out" to the food item **52**. In this embodiment, the device **50** may include a bar code scanner, a magnetic strip reader or a camera capable of identifying the food item **52**. Also, the embodiment shown in FIG. **1**B represents where the device **50** receives a manual input of a code or other that identifies the food item **52**.